Business-led sustainable consumption initiatives – impacts and lessons learned

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Abstract

Sustainable consumption is a key driver in the move to a more sustainable future world. This paper investigates whether and how companies can drive sustainable consumption through the way they do business. The paper discusses four case studies of business-led sustainable consumption initiatives by large multinational companies, and assesses the triple bottom line impacts and wider political/ legal, economic, social, technical and environmental drivers. It also includes two smaller cases of forward-looking companies and their progress in influencing consumer behaviour through their knowledge on consumer influence and marketing techniques. From the cases it appears that collaborative initiatives are impactful, because influence from multiple areas can help normalise new behaviour. The case initiatives discussed have emerged without regulatory pushes, but these initiatives do not come close to the levels required to achieve desirable carbon emissions levels to mitigate climate change. Regulation can help level the playing field of companies in an industry and force absolute reductions in consumption, similar to the case of the energy industry. Detailed work is required to map out the most suitable policy frameworks for encouraging sustainable consumption by industry.

1. Background

This paper investigates whether and how companies can drive sustainable consumption through the way they do business. Sustainable consumption broadly covers all aspects of a person's lifestyle in which resources are consumed (IPPR, 2013). Because goods and services are deeply rooted in the cultural fabric of our lives, stimulating sustainable consumption should be about building supportive communities, promoting inclusive societies, providing meaningful work and encouraging purposeful lives (Sustainable Development Commission, 2011). Hence, consumption patterns must be understood within the wider social, cultural and institutional context in which they exist (Jackson, 2009). Companies, which through the provision of products and services and market campaigns create and fulfil needs, have an important role in society. As the key driver for (unsustainable) consumption, they could become the key driver for sustainable consumption.

Consumer behaviour is not easy to rationalize or deconstruct, although key authors have sought to deconstruct consumer responses into attitudes, intentions, ability to influence behaviour and actual behaviour (Ajzen, 1991; Armitage & Conner, 2002), and a construct of internal factors such as personality, external factors (e.g. social and cultural context, economic situation), typical behaviour patterns, and incentives to change behaviour (Kollmus & Aygeman, 2006). Even if people know the right or logical response, real responses often differ (Bocken & Allwood, 2012). Jackson (2009) points to the significance of habits and social norms and the need to 'unfreeze' existing behaviour to raise the behaviour from the level of 'practical' to 'discursive' consciousness. As Jackson (2009) summarises: "my behaviour in any particular situation is a function partly of my attitudes and intentions, partly of my habitual responses, and partly of the situational constraints and conditions under which I operate. My intentions in their turn are influenced by social, normative and affective factors as well as by rational deliberations. I am neither fully deliberative nor fully automatic in this view. I am neither fully autonomous nor entirely social. My behaviours are influenced by my moral beliefs, but the impact of these is moderated both by my emotional drives and my cognitive limitations....”. As a consequence, changing consumer behaviour is a delicate issue and appears most impactful when it influences multiple facets (individual incentives, social normalisation, availability/ access and control) simultaneously.

There is a role for companies to play in changing consumer behaviour for good through providing information (e.g. labels), marketing and branding and choice editing for example (Bocken & Allwood, 2012). Companies can build on what marketeers do best: stimulate desirable behaviour. As Lucy Shea, CEO of sustainable communications agency Futerra (in Rowley, 2012) argues: Marketing campaigns can seek to encourage people to live more sustainably, but "it's entirely in the hands of the consumer whether they do or not" (…) "It rests entirely on the efficacy of that campaign, and often behaviour change doesn't result." (…) “An alternative is for brands to "build in behaviour change so there is no choice but to use a product in a lower impact way”.

Two key approaches can be defined to transform consumption patterns: the market based approach and the absolute reduction approach. The *market based approach* assumes that sustainable consumption will result from more efficiently produced goods, the ‘green / ethical’ consumer being the driving force of market transformation by incorporating social and environmental concerns in purchasing decisions. This relies upon ‘sustainable consumers’ to demand sustainably produced goods and send market signals (Seyfang, 2005).

The market-based approach has not yet delivered the required changes: global temperatures are still on the rise due to climate change. Climate change is highly connected to other issues such as land use changes and food security, so these issues cannot be dealt with in isolation (IPCC, 2014). Our rising population will require significantly different ways of doing business (WBCSD, 2014) and consumption patterns. There are some sparks of hope. The Boston Consulting Group in a survey (BCG, 2014) observed a slight shift in consumer demand: their survey showed that specialty manufacturers of natural products have achieved a 12.5 per cent growth on average, while A-brand consumer packaged goods brands that have launched the occasional green product have seen growth of 1.3 per cent, (BCG, 2014). High-margin “responsible products” have grown to 15 per cent of grocery sales (BCG, 2014). This is just a small example of a shift in sales, but bigger change is required to radically change consumption patterns.

An alternative approach to define sustainable consumption proposes an absolute reduction on consumption and takes economic growth into question (Seyfang, 2005). This may be referred to as *‘absolute reduction approach’.* Absolute reductions in sales (e.g. in the case of energy service companies urged by governments to reduce energy consumption with end users) focus on the core of the problem: overconsumption. As part of the common Threads Platform, in 2011 the outdoor brand Patagonia for example ran an advertisement in the New York Times imploring “Don’t Buy This Jacket”: Patagonia pledges to make useful stuff that lasts for a long time, whereas consumers were asked to only but what they need (Patagonia, 2014). Furniture manufacturer Vitsœ in a video shares its vision against planned obsolescence – ‘the design and manufacture of products that are deliberately intended to have a limited useful life’ –, which results in an endless cycle of replacement and repurchasing (Fablemaze Weather, 2014). This type of marketing focused on redefining consumption however is not yet very common. Choice editing, organising the context in which people make decisions (Thaler and Sunstein (2009, p. 3), and product bans are other ways of redefining consumption (Bocken & Allwood, 2012). Figure 1 includes the reactive market based and proactive absolute reduction approaches.

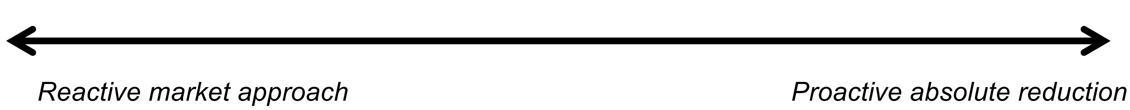

Figure 1. Approaches for sustainable consumption. Source: based on Seyfang (2005)

This paper addresses the following questions: *What evidence can be found on the effectiveness of businesses in running consumer-based environmental programmes? What are the lessons learned from key cases?* The paper will investigate the cases first by the social, economic and environmental benefits delivered, followed by an analysis of the PESTLE factors, to map the wider political/ legal, economic, social, technological and environmental elements being influenced by the companies (Allwood et al., 2008). Subsequently, the cases are summarised according to the following elements:

- *The individual context,* concerned with influencing individual choices directly, for example through product promotions and product placement (similar to the 'internal factors' in Kollmus & Aygeman, 2006)
- *The social context,* concerned with normalising behaviour (the social context in Kollmus & Aygeman, 2006)
- *PESTLE factors*, to map the wider **p**olitical, **e**conomic, **s**ocial, **t**echnological, **l**egal and **e**nvironmental elements being influenced by the companies. In this paper the political and legal factors are combined.

2. Methods

The paper focuses on a range of sectors and cases that discuss strategies by businesses to address consumption patterns. Cases were selected based on sufficient evidence being available on the effectiveness of consumer-based environmental programmes. Hence, it is a convenience sample. Cases of large established companies (Marks & Spencer and Unilever) and fast growing relatively new companies (Airbnb and Zipcar) are discussed in detail:

- Marks & Spencer – Plan A, and Shwopping in particular as a consumer-based strategy to reduce textiles waste
- Unilever – Sustainable Living Plan and examples of reducing GHGs and water use in the consumer use phase
- Airbnb – sustainable consumer behaviour through a sharing economy business model
- Zipcar – sustainable consumer behaviour through a car club model

The cases presented are based on public information from annual reports, sustainability reports, the company websites and relevant reports on the environmental performance of the companies to elicit consumer behaviour change.

The companies can be classified as those pursuing a 'proactive market approach' (Figure 2). Although in the long run absolute reductions in consumption might be the aim, none of the case companies advocates for absolute reductions in consumption, but they seek to drive change through novel business models, products and marketing strategies.

Two additional cases of companies, which are not publically trading – Patagonia and Vitsœ – are presented because they are closer to the proactive absolute reduction aspirations in Figure 2.

Reactive market approach ⟷ *Proactive market approach* ⟷ *Proactive absolute reduction*

Figure 2. Approaches for sustainable consumption. Source: based on Seyfang (2005)

2. Cases of companies driving sustainable consumption

The four cases of companies seeking to drive sustainable companies through the way they do business are discussed in this section.

2.1 Marks and Spencer - Shwopping to drive garment recovery, reduce waste and support developing countries

Plan A started in 2007 with 100 commitments to achieve in 5 years and has been updated in 2014 with a set of new and revised sustainability commitments to become "the world's most sustainable major retailer" (Marks and Spencer Plc, 2014). Plan A started as a large-scale Marks and Spencer (M&S) -wide sustainability initiative focused on 'doing the right thing' for society and the environment. "Doing the Right Thing" has been the key slogan for Plan A. Whereas doing the right thing was the driver, its update reports also show the net benefits received through Plan A. In 2009, Plan A first experienced a break-even point and has been generating net benefits since 2010, a good part of the benefits originating from improved resource efficiency, but also from initiatives that drive (new) revenue streams (Marks and Spencer Plc, 2014). Plan A is becoming more integral to the way business is done and M&S seems to become more mature in understanding the business benefits of Plan A. The company also works with those at the heart of the organisation through employee representatives and the store management teams. In 2013, the company asked over 2,000 employees what they thought could be improved. Mike Barry, Director of Plan A sees this as a powerful process: "As a result of sharing their knowledge, people feel empowered. Normally with corporate initiatives, you don't get anything back. Constant feedback and engagement takes time, but it's worth it" (Knowles, 2013).

An example of a Plan A initiative is 'Shwopping', where consumers are urged to bring back unwanted clothes to M&S stores when buying something new. The scheme started in 2012 and is part of M&S's Plan A and an extension of a partnership with Oxfam which began in 2008. The original scheme allowed customers to donate their clothing at any time at Oxfam stores and at "One Day Wardrobe Clearouts" (Smithers, 2012) in exchange for discount vouchers at M&S for example. While shwopping generates environmental and social benefits by diverting clothing from landfill and generating income for Oxfam for projects in developing countries, it might also generate traffic to the stores and lead to more purchases in M&S stores.

H&M's Garment Collecting Programme

A similar programme to Shwopping launched in 2013 is H&M's Garment Collecting Programme. Launched in 2013, it has collected 3,047 tonnes of garments - the equivalent of about 15 million t-shirts (H&M, 2014). This is still only a fraction (less than 3 per cent) of the 550 million garments it sells annually (Siegle, 2014). H&M customers can drop clothes in a collection box – after which, similar to M&S, these will be resold as second hand or turned into cleaning cloths or insulation material. H&M's aim was to prove it is possible to 'close the loop' of textile production by eliminating waste and decreasing the environmental impact of the fashion industry. Similar to M&S, the collection rates are far behind the sales numbers as discussed next.

2.1.2 Environmental, economic and social benefits

Since M&S started the Shwopping initiative with Oxfam, they collected 7.8 million garments, worth an estimated £5.5 million to the charity. Table 1 shows the growing success of Shwopping. By shwopping, M&S hope to achieve a dramatic reduction in the number of clothes sent to landfill in the UK estimated at around 1bn items or an average of 16 items per year per person (Marks and Spencer, 2014). By collecting as many clothes as they sell, they want to change the way people shop.

Since its inception, M&S consumers have donated nearly 8 million unwanted clothing items through Shwopping, which can be resold, reused or recycled by Oxfam and to date have generated £5.5 million in revenues for Oxfam (Marks and Spencer Plc, 2014). This £5.5m goes directly into Oxfam's development, emergency and campaigning programmes. Overall, Plan A has started to generate more income than costs (Table 2).

Year	M&S Group revenue	Plan A Garment Recovery	M&S target recovery	Plan A value created	M&S customers engaged digitally	Average total UK garment waste annually
Plan A 2014 report	£ 10.3 bn	4 million garments	350 million garments (equivalent to as much as it sells)	£ 3.2 million for Oxfam	800,000 (since 2011)	1 bn items per year (M&S estimate in 2014)
Plan A 2013 report	£10 bn	3.8 million garments		£ 2.3 million for Oxfam		
Totals:	7.8 million garments recovered, £ 5.5 million to Oxfam					

Table 1. Successes of the Shwopping Programme. Source: Marks & Spencer plc (2014)

Year	2008	2009	2010	2011	2012	2013	2014
Cost or benefit of Plan A	£ 40m invested	£0 Plan A breaks even	Plan A generates £50m in net benefit	Generates £70m in net benefit	Generates £105m in net benefit	Generates £135m in net benefit	Generates £145m in net benefit

Table 2. Plan A benefits. Note. A large part of these benefits come from improved resource efficiency, although M&S are deriving benefits from initiatives that drive additional revenue streams. Source: Marks & Spencer plc (2014)

2.1.3 Political, Economic, Social, Technologic and Environmental factors

Policy/ legislation: M&S, similar to several consumer-facing businesses is not yet facing specific environmental legislation limiting their carbon emissions or urging them to take responsibility for their products at the end of their useful lifetime. Hence, M&S actions are ahead of legislation. The Plan A website (Marks and Spencer Plc, 2014) confirms the need to operate sustainably through the slogans of the company: “Doing the Right Thing” and “Plan A, because there is no Plan B”.

Economic: Discount vouchers on new clothes, such as a 5 Euros discount on new clothes with H&M can help incentivise new behaviour.

Social: Targeted action such as the “Wardrobe clear-outs” and celebrities promoting Shwopping can help normalise behaviour.

Technical: An important technical challenge is the logistical framework to ensure clothes are shipped from the shops to Oxfam. This can be done through the existing logistical networks of the businesses and the widespread local presence of both M&S and Oxfam shops.

Environmental: Both the M&S and H&M campaigns are driven by environmental impact and wanting to close the loop. Both businesses do not (directly) profit financially from the initiatives.

2.1.4 Case overview

The returned items present only a fraction (± 1-3 %) of the total number of garments M&S and H&M sell and want to reclaim and probably cost a lot more than it benefits the companies financially. Still, the total benefits of the full Plan A programme are on the rise and both companies have experienced overall positive financial figures and growth. H&M in 2012 for example opened on average one store a day (H&M, 2013). M&S remains Great Britain’s biggest clothing retailer by value (whereas Primark leads in volume; Felsted, 2014). The initiatives generate additional social and economic benefits through the charities involved. Figure 3 shows an overview of M&S’ influencing activities.

	"Informing"	"Positively-directing"	"Negatively-directing"	"Forcing"
Individual context	Plan A – "Doing the Right Thing" Shwopping – explain buy one, give one	Discount vouchers Empowering M&S employees		
Social context		Celebrities who shwop Oxfam – collaboration to boost success Recurring wardrobe clear-out days		
Political, Economic, Social, Technologic, Environmental context	Environmental impact reduction as main concern	Profits going to charity as positive, social incentive		

Figure 3. M&S case framework of consumer behaviour influencing tactics. Developed from Bocken & Allwood (2012).

2.2. Unilever

Unilever's current CEO Paul Polman wants Unilever to change the way they operate to avoid 'theft' (of resources, biodiversity etc.) from future generations (Banning and Rijlaarsdam, 2013). He believes that a company can only be successful in the future when it is in sync with society, in other words, when a company is good for the consumer, society, its employees and key stakeholders. The Unilever Sustainable Living Plan launched in 2010 aims to halve the environmental footprint associated with making and using its products by 2020 while growing the business (Unilever, 2014).

Unilever made their "Five Levers for Change" public (Unilever, 2014), because they believe that there are wider benefits from sharing their work with others. Systematically, Unilever seeks to identify what they know about their customers:

- Barriers – what are the things that stop people from adopting a new behaviour?
- Triggers – how could they get people to start a new behaviour?
- Motivators – what are the ways to help them stick with the new behaviour?

They apply "Five Levers for Change" (Unilever, 2014) as a practical tool developed from their most effective behaviour change campaigns:

1. Make it understood. Do people know about the behaviour? Do they believe it is relevant to them? This lever raises awareness and encourages acceptance.
2. Make it easy. Do people know what to do and feel confident doing it? Can they see it fitting into their lives? This lever is about 'convenience and confidence'.
3. Make it desirable. Will this new behaviour fit with their actual or aspirational self-image? Does it fit with how they relate to others? This lever is about 'self and society'.
4. Make it rewarding. Do people know when they are doing the behaviour 'right'? Do they get a reward for doing it? This is about d the 'proof and payoff'.
5. Make it a habit. Once people have made a change, what can Unilever do to help them keep doing it? This is about 'reinforcing and reminding'.

The five levers show the types of influencing tactics at the individual, social and systems level to reinforce, normalise and remind people of certain behaviours.

2.2.1 Unilever Sustainable Living Plan and Consumer behaviour

Unilever's Sustainable Living Plan sets out to decouple the business' growth from its environmental impact while increasing its positive social impact (Unilever, 2014).

Behaviour change is fundamental to achieving the goals set out in the Unilever Sustainable Living Plan. Unilever (2014) estimates that two thirds of their value chain greenhouse gas (GHG) impact and 85% of their water footprint originate from consumer use: primarily heated water for showering and bathing. This is difficult to influence and Unilever believes that successful change comes from a real understanding of people, their habits and motivations and creating sustainable products without compromising price, quality or taste (ibid.). The company positions marketing as a powerful force for behaviour change and it uses campaigns to raise awareness and encourage behaviour change through its brands.

Examples of Unilever trying to influence consumer behaviour in the past include encouraging consumers to wash their hands with soap at the right times of day to reduce disease; to brush their teeth twice a day for oral health; and to eat margarine instead of butter for good heart health. More recently, the Unilever Suave shampoo brand in collaboration with Walmart has sought to communicate how turning off the tap when lathering hair can save money on utility bills (Unilever, 2011). Clearly and naturally, in this case 'consumer behaviour change' goes hand in hand with product sales.

Despite work to reduce consumer use related environmental impact, Unilever's greenhouse gas footprint impact per consumer use has increased by around 5% since 2010 (which it ascribes to the acquisition of the Alberto Culver brand, including shampoos and soaps; Unilever 2014). Hence, in the areas where they have less control, it proves more difficult to influence consumer than in areas such as manufacturing for example (CO_2 emissions from energy from their factories have been reduced by 32% since 2008; Unilever, 2014). The next sections show three examples of where Unilever has sought to influence consumer behaviour.

Seeking to influence showering behaviour

A 2011 study by Unilever amongst 100 families over a 10-day period found that they showered on average eight minutes, which uses 62 litres of hot water (compared to an average bath's 80 litres; Kinver, 2011) costing the average UK family about £416 a year (Unilever, 2014). When power showers are used, this uses over two times more water than a bath, costing £918 a year (Kinver, 2011). Although no experiments on shower behaviour in the UK were identified, in the US, Unilever and Walmart initiated the "Turn off the Tap" campaign to make customers more water-aware. It was estimated that Unilever's US hair and skin products alone, account for 27% of its total global greenhouse gas footprint, mostly resulting from the energy needed to heat hot water in people's showers (Unilever, 2011). Unilever estimates that 33 million households buy Suave from Walmart and over 40% of people would be willing to conserve water if they knew it would save money and help the environment (Unilever, 2011). This led to the following claims being used by the Suave brand in Walmart stores (ibid.):

- "Did you know that your family could save up to $100 and 3,200 gallons of water per year by turning off the water when you shampoo and condition?"
- "Did you know your family could save up to $150 and 4,600 gallons of water per year by shortening your shower time by 2 minutes?"

In-store promotion in June 2011 including these messages and an added incentive of $5 off the price of an efficient shower head, resulted in promotional packs of the Suave brand being sold out in three weeks (Unilever, 2011). However, results on further successes of the campaign and transformation of shower behaviour are not (yet) available.

Laundry – using shorter colder washing cycles

In Europe, an average of 35.6 billion laundry-loads are done every year and European households do the laundry on average 3.2 times a week (A.I.S.E., the International Association for Soaps, Detergents and Maintenance Products, 2013a). The 40°C cycle is most popular (68% use this cycle; A.I.S.E., 2013a). Lower temperature washing detergents are emerging, which allow for effective cold or 30°C temperature laundry. Washing clothes at 30°C rather than 40°C can reduce energy consumption by up to 40% (DEFRA, 2009). Next to reducing the number of cycles a week and washing at lower temperatures, shorter cycles are a potential solution to reduce the impact associated with doing the laundry.

Unilever (2014) estimates that if all 26 billion washes done by consumers in Europe each year moved from a two-hour standard cycle to a 30-minute wash, this would save 40 billion of hours of machine time and reduce energy by around 30%. It communicates the benefits of shorter and low-temperature washing on its packs and online, encourages consumers to use the right dosage and became gold partners in the A.I.S.E 'I prefer 30°' campaign. Since 2009, its laundry brand Persil has been actively encouraging consumers to shorten its washing machine cycles, whilst improving product performance (e.g. Persil Small & Mighty). In 2013, 1 in 5 loads in the UK were done on shorter cycles, an increase from 9% in 2003, whereas in Europe as a whole the average washing temperature dropped and washing at lower temperatures became more frequent (Table 3). However, this can be viewed as a success for A.I.S.E. and other consumer goods manufacturers such as P&G, Henkel and Unilever together, rather than an individual success for Unilever.

	2008	**2011**
Average washing temperature in Europe	43 °C	41°C
% Of washes at 30 °C or lower in Europe	29%	32%
Belief with European consumers that washing at low temperatures can help a lot in reducing environmental impact of washing	64%	74%

Table 3. Comparing survey data on laundry behaviour. Source A.I.S.E. (2013a). Note. Studies took place in 2008 and 2009 in 23 European countries (A.I.S.E., 2013a).

Choice editing – sustainable palm oil

Palm oil is a key ingredient for several consumer products (e.g. make-up, cleaning products, food). Its heavy use has led to deforestation and destruction of natural habitats (WWF, 2014). In 2001, WWF started exploring the possibilities for a Roundtable for Sustainable Palm Oil (RSPO), which resulted in an initial informal co-operation among Aarhus United UK Ltd, Migros, Malaysian Palm Oil Association and Unilever together with WWF in 2002 to make sustainable palm oil the norm (RSPO, 2014). Unilever uses 3% of the world's palm oil, equivalent to 1.5 million tonnes (Unilever, 2014). Unilever targeted for 100% of its palm oil to be RSPO certified by 2010 and after it achieved this target in 2012 through GreenPalm certificates, Unilever made a new commitment to pursue traceable certified palm oil by 2020 (RSPO, 2014). In 2013, only 4% of palm oil purchased from certified, traceable sources (Unilever, 2014), which shows the challenge to move towards a more transparent value chain.

2.2.2 Political, Economic, Social, Technologic and Environmental factors

Policy/ legislation:
Unilever's Sustainable Living Plan was not initiated because of legislative concerns, but similar to M&S, out of the concern of wanting to do the right thing by reducing the environmental impact associated with its products, according to its website (Unilever, 2014). Through its size and worldwide presence, Unilever has had an influence in various "extra policy frameworks" (initiatives and frameworks that seek to benefit the public good and emerged outside legislative frameworks). Examples include the round table on sustainable palm oil (RSPO, 2014) and the

Marine Stewardship Council (MSC). The Marine Stewardship Council (MSC) labelling program for example promotes sustainable fisheries (MSC, 2014) and was initiated in 1997 as a collaborative initiative between WWF and Unilever (a large buyer of fish). In 1999 MSC became an independently run non-profit organization (Consumers Union of United States, 2014). The MSC has since developed two separate standards: The MSC environmental standard for sustainable fishing and The MSC Chain of Custody standard for seafood traceability (MSC, 2014).

Economic

The Unilever Sustainable Living website (Unilever, 2014) shows several business cases for sustainable living:

- By focusing on sustainable living needs Unilever aims to build stronger brands
- By looking at product development, sourcing and manufacturing through a sustainability lens, opportunities for innovation and cost reduction emerge
- By sourcing sustainably it can reduce risk in its raw material supply chains.

Although Unilever's turnover dropped in 2013, its operating profits went up (Table 4).

Year	2010	2011	2012	2013
Turnover	€44.3 bn	€46.5 bn	€51.3 bn	€49.8 bn
Operating profit	€6.3 bn	€6.4 bn	€7 bn	€7.5 bn

Table 4. Unilever turnover and profits. Based on Unilever annual reports.

Social:

From these cases, it appears that habits are difficult to change by individual companies or organisations. Engagement with multiple partners, for example through industry associations such as the A.I.S.E. can serve as an important platform for change. The A.I.S.E has 9 direct members, all fast moving consumer goods manufacturers, but also involves national associations in 39 countries, representing 900 companies and is active in a broad range of fields, both through voluntary initiatives and through contributions to policy affairs (A.I.S.E, 2013b).

In other cases such as sustainable palm oil usage, Unilever also collaborates with others to normalise new forms of consumption. Unilever buys 3% of the world's palm oil and multinational companies around 20%. On its website Unilever argues that "getting the other 80% on board will not be easy" nor "will any plan succeed without China and India, both major purchasers of all four commodities (palm oil, soy, beef and paper and pulp) where a solution needs to be found to make buying sustainably sourced crops more attractive" (Unilever, 2014).

Technical:

Innovations such as dry shampoo to postpone and reduce the number of hair washes, and concentrated low temperature laundry detergent aim to facilitate consumer behaviour change.

Environmental:

The Unilever sustainable Living Plan is driven by environmental and business, rather than legislative concerns.

2.2.3 Case overview

Unilever's Sustainable Living Plan focuses on the product life cycle impacts of the company. Unilever (2014) argues that the 'consumer use phase' of products dominates its overall footprint. Therefore, influencing consumer behaviour is a key strategy to reduce environmental impact. Figure 4 maps Unilever's levers for change in italics. Unilever seeks to drive changes through its brands and innovations (for example, dry shampoo might help postpone one hair wash and hence safe water and greenhouse gases). It also provides information to help people understand the advantages of a consumer behaviour change and tries to identify options to make consumer behaviour a habit through collaborations. Hence, it focuses on various ways to influence consumer behaviour and choice, through choice editing (e.g. only sustainable palm oil).

	"Informing"	"Positively-directing"	"Negatively-directing"	"Forcing"
Individual context	*Inform/ make people understand* Messaging with brands: Shorter showers save money and the environment	*Reward* *Make it easy* *Make it desirable* Product innovations Product promotions Joint promotions in stores Choice editing		
Social context		*Make it a habit* Normalising shorter laundry cycles through collaboration with A.I.S.E.		
Political, Economic, Social, Technologic, Environmental context		Joined the A.I.S.E. to tackle laundry detergent use Joined the RSPO to tackle sustainable palm oil		

Figure 4. Unilever case framework of consumer behaviour influencing tactics. Developed from Bocken & Allwood (2012)

2.3 Airbnb: sharing homes

Airbnb was founded in August of 2008 and is based in San Francisco, California. Airbnb is a community marketplace for people to list, find and book accommodations around the world – online or from a mobile phone (Airbnb, 2014a). The company creates local travel experiences, through home sharing in over 35,000 cities and 190 countries and is growing rapidly (Airbnb, 2014a). Airbnb created and dominates a new market segment: private homeowners use its Internet platform to list and collect payments for their rooms and houses, with mobile apps and peer-to-peer feedback (Lunden, 2014).

2.3.1 Environmental, economic and social benefits

Airbnb has quickly claimed a large part of the market for short-term business and holiday stays (Table 5) - in only 6 years time it grew nearly as large as traditional hotel groups.

	# of rooms	Age
Airbnb	500,000	6
Couchsurfing	1,200,000	10
IHG	645,000	>60
Accor	500,000	>40
Hilton	600,000	>90

Table 5. Airbnb's rapid growth compared to traditional hotel groups. Source: Chase (2012)

This success has led to large investments from venture capitalists - in April 2014 it raised $500 million at a $10 billion valuation, which brings the total raised by Airbnb to $826 million (Lunden, 2014)

Airbnb claims its business model is suited to deliver local value creation and environmental impact reduction (Airbnb, 2014b). Airbnb was developed based on the concept of using 'access capacity' (renting out spare rooms) more efficiently. The name Airbnb originated from the air mattresses initially used in San Francisco in spare rooms rented out to conference attendees. "Environmentally, maybe someday we'll never have to build another hotel. San Francisco hasn't built a new hotel room in nine years and I don't think it's a coincidence that we've been successful during that time", according to Airbnb's Director of Public Policy, Molly Turner (Wong, 2013). Efficient use of space thus may be an important environmental 'win' of Airbnb. A study commissioned by Airbnb and executed by Cleantech Group (Airbnb, 2014b) identifies the following environmental benefits facilitated by Airbnb's business model and different behaviour of Airbnb guests, compared to hotel guests:

- In Europe, Airbnb guests use 78 percent less energy than hotel guests
- Airbnb guests in Europe saved the equivalent of 1,100 Olympic-sized pools of water while avoiding the greenhouse gas emissions equivalent to 200,000 cars on European roads in one year.
- Airbnb guests in North America saved the equivalent of 270 Olympic-sized pools of water while avoiding the greenhouse gas emissions equivalent to 33,000 cars on North American roads in one year.
- Airbnb guests are up to 15 percent more likely to use public transportation, walk or bicycle as their main mode of transportation than if they had stayed at a hotel.
- Less than half of Airbnb hosts in both North America and Europe provide single-use toiletries for their guests, reducing waste.

The environmental downside is the additional travel Airbnb might cause, which will be an effect that is harder to capture and measure, although Cleantech Group (Airbnb, 2014) claims that the environmental benefits of its business model outweigh the cost.

2.3.2 Political, Economic, Social, Technologic and Environmental factors

<u>Policy/ legislation:</u>
Similar to other companies that have disrupted older more established industries such as Uber (disrupting the taxi industry), Airbnb has received strong opposition from incumbent competitors, mainly established hotel groups, which is not surprising given its quick growth (Table 5). In Airbnb's case the hotel industry has opposed its model, which has led to legal and regulatory fronts in different cities (Lunden, 2014). According to Molly Turner: "the problem with the sharing economy is while the ethos is the same whether sharing your home or car, the regulatory context is drastically different (…). For example, look at peer-to-peer home sharing and ride sharing. The regulatory solutions are all different, so not one overall sharing policy will work. (…) [W]e know a host of questions has come up and we hope to figure out answers to these questions not in a siloed manner. (…) The sharing economy is just now starting to gain recognition – it's still in early adopter stage."

Existing industries, their lobbyists, and existing policies can make or break new business models. Incumbent firms (e.g. the hotel industry) may point at regulations they will need to abide by, such as the need to pay tourist taxes and take fire safety measures, to ensure that newcomers such as Airbnb do the same. While this is fair, this may stagnate start-ups' growth. In the case of Uber for example, Germany (temporarily) banned the company, because it did not meet the strict legislations taxi drivers have to abide by (Matussek, 2014).

<u>Economic:</u>

Airbnb is said to benefit homeowners and cities financially: it can make holidays more affordable, ensure that hosts can pay their rents or mortgages, and help create value for small locally owned businesses (Wong, 2013).

Social:
Airbnb banks on local experiences and encourages hosts to offer guests local experiences: "I really think we're socially sustainable because a lot of forms of tourism are created from scratch – Disneyland or Las Vegas, for example, built a destination from scratch. Or you might have a historical context like Chinatown but you're packaging it for tourists in a nice and neat tidy way, which does not provide as an authentic experience as possible. That has social impacts on people who live there as well as the indigenous culture there" (Molly Turner in Wong, 2013).

Airbnb relies on its hosts, people who make their homes available to guests: "Airbnb lives and dies on the quality of its hosts, the people offering their homes. We have an amazing community of people who are incredibly hospitable not just about their homes, but also about their neighborhoods. (…) The fact that we know people are using Airbnb because they can't afford to stay in their own homes is important. You need to have an understanding of why people are participating in this service, and that you as the Internet company are giving them the tools to do this." (Molly Turner in Wong, 2013). Airbnb thus argues that its peer-to-peer model can create a more authentic and social travel experience.

Technical:
Built on apps and peer-to-peer reviewing and integrated with PayPal, Airbnb is an organisation facilitated by the new economy and an example of a company who keeps expanding its sharing business geographically and across segments (it does not only include spare rooms anymore, but extends its offer to tree huts and whole islands).

Environmental:
Although Airbnb might have environmental benefits (using access capacity, more environmentally conscious guests than in hotels), overall it might encourage more travel and outweigh benefits, a phenomenon that needs to be studied in detail.

2.3.3 Case overview

Airbnb claims that its business model is inherently more socially, economically and environmentally sustainable than the incumbent hotel industry. However, detailed independent analysis would need to be conducted to verify these claims and a longitudinal study could help analyse whether Airbnb leads to more or less travel. Figure 5 broadly maps Airbnb's tactics and opposition (red areas).

	"Informing"	"Positively-directing"	"Negatively-directing"	"Forcing"
Individual context		Messages for hosts: "Sharing your home pays the bills; Sharing your home is fun"		
Social context		Peer to peer review platform, insurance for homeowners, and Paypal payments makes AirBnB easy to use and safe		
Political, Economic, Social, Technologic, Environmental context		AirBnB could be successful in the economic downturn – making homes affordable for hosts and holidays affordable for guests	AirBnB has been criticized for breaking laws and avoiding strict rules that apply to hotels (e.g. tourist tax)	Although popular and growing, AirBnB has been banned (partially) is some geographical areas

Figure 5. Airbnb's case framework of consumer behaviour influencing tactics. Developed from Bocken & Allwood (2012)

2.4 Zipcar: sharing cars

ZipCar was founded in 2000 as a car sharing company, allowing users to use cars at their discretion as a service, rather than as a product (i.e. car) they would own. Since its inception, the company has grown significantly (Table 6). However, due to large initial capital investment required, it was not until 2012 that is started to make a profit.

650,000 +	Users
9000 +	Cars and car parking spots
500,000,000	Liters of petrol saved
1.16	Million tons of CO2 saved
40%	Sold their car or did not buy new

Table 6. Key data on Zipcar's business. Source: Chase (2012)

Zipcar describes seven reasons why to join the company as a member on its website: saving money; only needing a car sometimes; the occasional need for a second car; the need for the occasional bigger car; jumpstarting a business; car use when travelling, and doing good for the environment by reducing car dependency (Zipcar, 2014). As such, the environmental benefit is portrayed as just one of the reasons why customers might choose Zipcar.

<u>Policy/ legislation:</u>
By creating its own competitive space and by working with existing car brands as part of its business model (Zipcar uses established brands as part of its car sharing model), Zipcar appears to have received relatively little legal opposition from competitors, in sharp contrast to companies

disrupting the taxi industry such as Uber and Lyft, who have received significant opposition by the incumbent industry (Matussek, 2014).

Economic:
Zipcar launched its Initial Public Offering (IPO) in 2011 and was acquired by car rental company Avis in 2013, which allowed for a diversification of Avis portfolio and a geographical expansion of the Zipcar brand. Avis Chief Executive Ron Nelson hopes that the deal will create several synergies: lower fleet costs, better fleet utilisation and increased revenue by targeting corporate clients, one-way rentals and airport bookings (Kell, 2013). Despite extensive growth rates, Zipcar was not profitable until 2012.

Social:
While Zipcar's model is not necessarily built on social connections, competitors such as Buzzcar and Blablacar are built around 'peer-to-peer sharing' and allow customers to share their cars with others. The model of Zipcar has paved the way for other businesses to emerge, such as the BMWi (car sharing model mainly for business) and Catch-a-Car (Swiss model of sharing cars without a pre-determined parking spot) making sharing more socially acceptable.

Technical:
Similar to Airbnb, Zipcar would not have been such a great success ten years ago, without the availability of 'apps' to reserve cars and the ease of online payments.

Environmental:
Zipcar claims the following environmental benefits on its website: it is estimated that every Zipcar takes six personally-owned vehicles off the road; contributing to the sharing movement; after joining Zipcar, 60% of its members drove less than 1,000 miles per year saving 829 liters of petrol per Zipcar member (Zipcar, 2014). Robin Chase (Chase, 2012), one of the founders of Zipcar claimed that when people pay for cars by the hour, they typically drive 80% less (Chase, 2012). Moreover, car-sharing models encourage the right behaviours with companies involved, such as reparability, fuel efficiency and durability (Bocken et al., 2014). This is much easier to manage by car sharing companies who also build their own cars and can therefore build them in a durable, reparable, modular and upgradable way from the start, an example being the UK start-up Riversimple (Riversimple, 2014).

2.3.4 Case overview

Although it is not its primary marketed benefit, Zipcar argues that its business model is better from an environmental perspective than car ownership (Zipcar, 2014), because customers carefully consider whether to drive or not and use the cars less often than if they had owned them. The model may also help take cars off the road and reduce the number of parking spots required (Chase, 2012). Figure 6 summarises the strategies adopted by Zipcar.

	"Informing"	"Positively-directing"	"Negatively-directing"	"Forcing"
Individual context	Its website includes seven reasons for individuals to join Zipcar, only one being associated with the environment, showing the additional benefits of car sharing			
Social context		Making car sharing available everywhere through the same Zipcar brand helps normalise sharing		
Political, Economic, Social, Technologic, Environmental context		Proving the concept of car sharing helps pave the way for other sharing platforms		

Figure 6. Zipcar's case framework of consumer behaviour influencing tactics. Developed from Bocken & Allwood (2012)

3. Two smaller cases on sustainable consumption

This section contains two additional examples of businesses, which seek to transform consumer behaviour: Patagonia and Vitsœ. Because they are not publicly trading (precisely because of sustainability reasons) a limited amount of data are available on their economic and environmental performance, so the case studies are only presented at a high level. However, they are included for their work on proactive absolute reductions (Figure 2).

3.1 Patagonia – Avoid and reuse

Patagonia started off as a mountaineering company when in the 1950s Yvon Chouinard started to develop and sell his own reusable pitons for climbing. By the 1970s, Chouinard decided to phase out the then popular pitons, realising their negative impact on the mountains and introduced aluminium chocks to be hammered by hand. Since then, environmental activism and education have been a key part of the business. The clothing business was established in the 1970s as a profit generator and to diversify the business (Chouinard & Stanley, 2012). A new name was found for the outdoor sports company: Patagonia. Within its growing clothing business, Patagonia also sought to include environmental concerns. For example, by 1996 all its cotton was organic and they have been exploring new options since (e.g. fabric made from hemp and recycled PET).

The Common Threads Partnership, a partnership by eBay and Patagonia is a good example of a company seeking to pursue 'sustainable consumption' (it was initiated in 2005 but rebranded in 2011; see Patagonia, 2014). In this partnership, Patagonia pledges to 'build useful things that last, to repair what breaks and recycle what comes to the end of its useful life', whereas customers in return are asked to pledge to only buy what is needed and will last, make repairs and reuse (share) what is no longer needed and recycle anything else. The platform with eBay encourages customers to join the initiative, take the pledge, and consider second hand products if they were to but a Patagonia product. In response to the question on how this developed, Vincent Stanley, Head of Patagonia Philosophy (personal communication, June 2014), says: *"E-Bay had approached us because they wanted to open an e-Bay storefront for new clothes. We countered with this idea and they were interested….. The CEO made the argument that the greenest product is the one that already exists."*

In the book "The Responsible Company" (Chouinard & Stanley, 2012) the dilemmas of being a responsible business are described: at some point in their existence, Patagonia received the advice to donate their money to charity if they just 'wanted to do good'. Instead, Patagonia founder Chouinard decided that through running a business it could show that 'good/ sustainable business' was also viable option. The tension of running a conscious business is clear from its 'anti-advertisement'. In a one-off advertisement in the New York Times, Patagonia asked its customers to "Not Buy" their jackets, trying to make them aware of the effects of their purchases and encourage them to make things last rather than buying new. Conventional marketeers criticised the approach as a gimmick to increase sales. According to Vincent Stanley, co-author of 'The Responsible Company' about Patagonia's way of doing business (Chouinard & Stanley, 2012), overall sales in Patagonia went up a little, whereas the sales of this particular jacket stayed the same (personal communication, June 2014). Dumaine (2012) observed that Patagonia as a private company has annual sales of round $400 million and "makes money even while encouraging its customers to consume less". Although some might not view Patagonia as more sustainable than other companies, it has been creating awareness about environmental issues and over-consumption through the way it runs its business and collaborations for example with E-Bay.

3.2 Vitsœ – against obsolescence

Vitsœ is a shelving and storage manufacturer and supplier. Vitsœ was the name of the company's founder, Niels Vitsœ, who together with Otto Zapf established Vitsœ in 1959 to realise the furniture designs of Dieter Rams (Vitsœ, 2014). It was founded in 1959 and now employs around fifty people. Its vision is to manufacture furniture to last as long as possible, be adaptable and discreet. The firm actively seeks to avoid built-in obsolescence and does not follow fashion or trends. The key ingredient to the customer-company relation is trust: customers' trust that Vitsœ has their best interest in mind, trust that the product will last, trust that customers can buy more as they need it and trust that the product is designed and manufactured for best possible service (personal communication with MD Mark Adams (November 2011; March 2012). Vitsœ's business, today, reflects the original concepts of the business – longevity, modularity, inter-changeability, closeness to the customer and sacrificing growth for this business model.

Vitsœ is a good example of 'sustainable consumption'. Vitsœ in a video shares its vision against planned obsolescence – 'the design and manufacture of products that are deliberately intended to have a limited useful life' –, which results in an endless cycle of replacement and repurchasing (Fablemaze Weather, 2014). Vitsœ's design is aimed to be timeless and durable and its 606 shelving system is still compatible with its first system decades ago. Vitsœ does not give discounts and employees do not receive sales commissions and seeks to provide customers with furniture solutions that 'do more with less'.

Although public data on Vitsœ's sales figures are not available, because it is not legally obliged to do so because of its corporate structure, Evans et al. (2009) found that since 1995, when Vitsœ moved all aspects of the company and production to the UK sales at Vitsœ have risen year on year by 20%. Hence, the business has been financially sustainable despite its unconventional sales techniques, banning sales commissions and avoiding overselling.

3.3 Case overview

The cases show two companies, which, without being urged by regulation, are seeking to make customers aware of the importance of sustainable consumption and looking after the products you own. The company's designs and business models are built around longevity/ durability, trust and high levels of service. Both Vitsœ and Patagonia advocate a lifestyle focusing on a careful consideration of one's consumption patterns. They encourage and stimulate reuse, considerate consumption, second hand markets and repair. However, despite of this, both companies have experienced significant continuous growth.

4. Discussion and conclusions

This paper investigated the following questions: What evidence can be found on the effectiveness of businesses running consumer-based environmental programmes? What are the lessons learned from key cases?

The cases presented in this paper show that individual companies are making important steps in the move towards sustainable consumption by applying their knowledge on consumer influence through marketing techniques. Collaborative initiatives are impactful, because influence from multiple areas can help normalise new behaviour. All initiatives discussed have emerged without regulatory pushes. However, none of the cases showed a significant change in consumption patterns, in other words, patterns that shift the dial in the direction that is needed to meet future carbon emissions targets and mitigate the negative impacts of climate change. For example, M&S' Shwopping led to a fraction (around 3%) of clothes being returned by customers. In the Unilever case, only 3% more people wash their clothes at 30 °C or lower in Europe over a period of 3 years, despite initiatives by the A.I.S.E and its members (Table 3). Despite asking customers to buy less, Patagonia as a company has experienced growth. More radical change in companies' ways of doing business is required to make the necessary shift in consumption patterns and associated carbon footprints.

Regulation can help level the playing field of companies in an industry and force absolute reductions in consumption, similar to the case of the energy industry, where energy service companies are incentivised to reduce their customers' energy bills. None of the cases are forcing new behaviour onto consumers (not surprisingly) or include negative messages. Although some companies have engaged in choice editing (e.g. the company B&Q banned sales of patio heaters; Brignall, 2008), forceful actions by companies are not widespread. Regulation can help edit out the most environmentally damaging products, similar to tungsten light bulbs, or energy inefficient white goods, which were phased out through labelling (Sustainable Consumption Roundtable, 2006).

Stepwise reductions in carbon emissions are required to mitigate climate change (IPPC, 2014). In developing countries this will need to result from significant change in industry practices coupled with a sense of individual responsibility to change 'high carbon' consumption patterns. Perhaps, change will never happen unless people receive a 'personal carbon budget' (Bocken & Allwood, 2012) or daily carbon emissions intake, facilitated by a transparent system of displaying the carbon emissions per product or service purchased. This can allow for absolute reductions rather than reductions in one area offset by sales in another area.

This work was based on a convenience sample of companies addressing sustainable consumption through the way they do business. Detailed work is required to map out the most suitable policy frameworks for sustainable consumption by industry, because the solutions are likely to be context specific and will require integration of policy areas.

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